

**WHAT IS CLAIMED IS:**

1. An electrolytic ion-water production apparatus, including an electrolytic cell connected to a tap water supply conduit through a water purifier for elimination of residual chlorine to be supplied with purified tap water for producing acid-ion water and alkaline-ion water by electrolysis of the supplied tap water when applied with DC voltage at a pair of opposed electrodes provided therein, discharge conduits provided to respectively discharge acid-ion water and alkaline-ion water produced in the electrolytic cell, and a faucet provided on the discharge conduit of alkaline-ion water,

wherein electric control means of the electrolytic ion-water production apparatus comprises:

a first electromagnetic on-off valve bifurcated from the discharge conduit at an upstream of the faucet;

a second electromagnetic on-off valve disposed in a bypass conduit bifurcated from the tap water supply conduit at an upstream of the water purifier and connected to the tap water supply conduit at a downstream of the water purifier;

electrolytic current control means for applying DC voltage between said electrodes when the faucet is opened to cause flow of the purified tap water supplied into the electrolytic cell through the water purifier in a condition where both the first and second electromagnetic on-off valves have been closed and for stopping the power supply to said electrodes when the faucet is closed; and

germicidal treatment means for starting measurement of a predetermined stopping time when the power supply to said electrodes has been stopped by closing of the faucet, opening both the first and second electromagnetic on-off valves upon

lapse of the predetermined stopping time, applying DC voltage to said electrodes when the electrolytic cell is supplied with a mixture of purified water from the water purifier and the tap water from the bypass conduit, and closing both the first and second electromagnetic on-off valves and stopping the power supply to said electrodes upon lapse of a predetermined time for germicidal treatment

2. An electrolytic ion-water production apparatus as claimed in claim 1, wherein said germicidal treatment means further includes preliminary germicidal treatment means arranged to open both the first and second electromagnetic on-off valves upon lapse of a predetermined temporal stopping time measured prior to measurement of the predetermined stopping time, to apply DC voltage to said electrodes when the electrolytic cell is supplied with a mixture of purified water from the water purifier and the tap water from the bypass conduit and to close both the first and second electromagnetic on-off valves and stop the power supply to said electrodes upon lapse of a predetermined time for preliminary germicidal treatment.

3. An electrolytic ion-water production apparatus, including an electrolytic cell connected to a tap water supply conduit through a water purifier for elimination of residual hypochlorous acid to be supplied with purified tap water for producing acid-ion water and alkaline-ion water by electrolysis of the supplied tap water when applied with DC voltage at a pair of opposed electrodes provided therein, and discharge conduits provided to respectively discharge acid-ion water and alkaline-ion water produced in the electrolytic cell,

wherein electric control means of the electrolytic ion-water production

apparatus comprises:

a pour switch of water provided to be operated for use of the alkaline-ion water discharged from the discharge conduit;

a first electromagnetic on-off valve disposed in the discharge conduit of alkaline-ion water;

a second electromagnetic on-off valve disposed in a drain conduit bifurcated from the discharge conduit of alkaline-ion water at an upstream of the first electromagnetic on-off valve;

a third electromagnetic on-off valve disposed in a bypass conduit bifurcated from the water supply conduit at an upstream of the water purifier and connected to the water supply conduit at a downstream of the water purifier;

electrolytic current control means for opening the first electromagnetic on-off valve when the pour switch of water has been operated in a condition where both the second and third electromagnetic on-off valves were closed, applying DC voltage to said electrodes when the electrolytic cell is supplied with a mixture of purified water from the water purifier and the tap water from the bypass conduit, and closing both the second and third electromagnetic on-off valves and stopping the power supply to said electrodes upon a predetermined time for germicidal treatment.

4. An electrolytic ion-water production apparatus as claimed in claim 3, wherein said germicidal treatment means is arranged to open both the second and third electromagnetic on-off valves upon lapse of a predetermined temporal stopping time measured prior to measurement of the predetermined stopping time,

to apply DC voltage to said electrodes when the electrolytic cell is supplied with a mixture of purified water from the water purifier and the tap water from the bypass conduit and to close both the second and third electromagnetic on-off valves and stopping the power supply to said electrodes upon lapse of a predetermined time for preliminary germicidal treatment.

5. An electrolytic ion-water production apparatus, including an electrolytic cell connected to a tap water supply conduit through a water purifier for elimination of residual chlorine to be supplied with purified tap water for producing acid-ion water and alkaline-ion water by electrolysis of the supplied tap water when applied with DC voltage at a pair of opposed electrodes provided therein, and discharge conduits provided to respectively discharge acid-ion water and alkaline-ion water produced in the electrolytic cell,

wherein electric control means of the electrolytic ion-water production apparatus comprises:

a pour switch of water provided to be operated for use of the alkaline-ion water discharged from the discharge conduit;

a first electromagnetic on-off valve disposed in the discharge conduit of alkaline-ion water;

a second electromagnetic on-off valve disposed in a bypass conduit bifurcated from the water supply conduit at an upstream of the water purifier and connected to the water supply conduit at a downstream of the water purifier;

electrolytic current control means for opening the first electromagnetic on-off valve and starting measurement of a predetermined time for pour of water

when the pour switch of water has been operated in a condition where the second electromagnetic on-off valve was closed, applying DC voltage to said electrodes when the electrolytic cell is supplied with purified water from the water purifier, and closing the first electromagnetic on-off valve and stopping the power supply to said electrodes upon lapse of the predetermined time for pour of water;

germicidal treatment means for starting measurement of a predetermined stopping time when the power supply to said electrodes has been stopped, opening both the first and second electromagnetic on-off valves upon lapse of the predetermined stopping time, applying DC voltage to said electrodes when the electrolytic cell is supplied with a mixture of purified water from the water purifier and the tap water from the bypass conduit, and closing both the first and second electromagnetic on-off valves and stopping the power supply to said electrodes upon lapse of a predetermined time for germicidal treatment

6. An electrolytic ion-water production apparatus, including an electrolytic cell connected to a tap water supply conduit through a water purifier for elimination of residual hypochlorous acid to be supplied with purified tap water for producing acid-ion water and alkaline-ion water by electrolysis of the supplied tap water when applied with DC voltage at a pair of opposed electrodes provided therein, and discharge conduits provided to respectively discharge acid-ion water and alkaline-ion water produced in the electrolytic cell,

wherein electric control means of the electrolytic ion-water production apparatus comprises:

a pour switch of water provided to be operated for use of the alkaline-ion